RELEASE NOTES FOR 4 April 2005 NWSRFS Release 27
(part of AWIPS Release OB6)

New versions of all NWSRFS executables for the linux workstations are included in Release 27. All the executables are included in this release because the operating system and the relational database engine have changed in this build.

The major enhancement in this build is the operating system change and the move from Informix to PostGres. In addition, the OFS-MAT pre-processor was updated to use one of five default diurnal disaggregation patterns. The default diurnal disaggregation is used primarily in the future period to disaggregate forecast Max/Min temperatures.

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More specific information about bug fixes and enhancements are given below in the sections for each program. Each bug fix is designated by an HSD bug # and a link back to the HSD support page where the bug is described.

More information about HSD reported bugs can be found by following the link to the HSEB bug list maintained by the RFC support group (http://www.nws.noaa.gov/om/water/RFC_support/hseb_buglist.shtml).

The release notes contain the following sections:

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1. What's included in the Release (Back to Top)
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1. WHAT'S INCLUDED IN THE RELEASE (tar file starts above dir lx/rfc)
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lx/rfc/nwsrfs/ofs/bin/RELEASE/batchpst
lx/rfc/nwsrfs/ofs/bin/RELEASE/espinit
lx/rfc/nwsrfs/ofs/bin/RELEASE/fcinit
lx/rfc/nwsrfs/ofs/bin/RELEASE/fcst
lx/rfc/nwsrfs/ofs/bin/RELEASE/filecrat
lx/rfc/nwsrfs/ofs/bin/RELEASE/filesize
lx/rfc/nwsrfs/ofs/bin/RELEASE/goesdb
lx/rfc/nwsrfs/ofs/bin/RELEASE/ndfd2rfs
lx/rfc/nwsrfs/ofs/bin/RELEASE/ppdutil
lx/rfc/nwsrfs/ofs/bin/RELEASE/ppinit
lx/rfc/nwsrfs/ofs/bin/RELEASE/prdutil
lx/rfc/nwsrfs/ofs/bin/RELEASE/reorder
lx/rfc/nwsrfs/ofs/bin/RELEASE/sasmdb
lx/rfc/nwsrfs/ofs/bin/RELEASE/shefpars
lx/rfc/nwsrfs/ofs/bin/RELEASE/shefpost

lx/rfc/nwsrfs/calb/bin/RELEASE/gs2oh
lx/rfc/nwsrfs/calb/bin/RELEASE/map
lx/rfc/nwsrfs/calb/bin/RELEASE/mape
lx/rfc/nwsrfs/calb/bin/RELEASE/mapx
lx/rfc/nwsrfs/calb/bin/RELEASE/mat
lx/rfc/nwsrfs/calb/bin/RELEASE/mcp3
lx/rfc/nwsrfs/calb/bin/RELEASE/opt3
lx/rfc/nwsrfs/calb/bin/RELEASE/pxpp
lx/rfc/nwsrfs/calb/bin/RELEASE/taplot
lx/rfc/nwsrfs/calb/bin/RELEASE/ts2oh

lx/rfc/nwsrfs/util/bin/RELEASE/create_bas_bound
lx/rfc/nwsrfs/util/bin/RELEASE/cvtgriddb
lx/rfc/nwsrfs/util/bin/RELEASE/get_apps_defaults
lx/rfc/nwsrfs/util/bin/RELEASE/looknset
lx/rfc/nwsrfs/util/bin/RELEASE/dbgen.jar
lx/rfc/nwsrfs/util/bin/RELEASE/ihfsdb.jar
lx/rfc/nwsrfs/util/bin/RELEASE/rfc.ob6-r27.jar

lx/rfc/nwsrfs/ifp/bin/RELEASE/IFP_Map
lx/rfc/nwsrfs/ifp/bin/RELEASE/NWSRFS_no_startup
lx/rfc/nwsrfs/ifp/bin/RELEASE/bin_to_ss_input
lx/rfc/nwsrfs/ifp/bin/RELEASE/delete_atoms
lx/rfc/nwsrfs/ifp/bin/RELEASE/delete_is_running
lx/rfc/nwsrfs/ifp/bin/RELEASE/ifp_nwsrfs
lx/rfc/nwsrfs/ifp/bin/RELEASE/parse_mods_by_segment
lx/rfc/nwsrfs/ifp/bin/RELEASE/post_default_run_dates
lx/rfc/nwsrfs/ifp/bin/RELEASE/print_prop
lx/rfc/nwsrfs/ifp/bin/RELEASE/seg_sort
lx/rfc/nwsrfs/ifp/bin/RELEASE/set_dates
lx/rfc/nwsrfs/ifp/bin/RELEASE/startifp_done
lx/rfc/nwsrfs/ifp/bin/RELEASE/working_dialog

lx/rfc/nwsrfs/icp/bin/RELEASE/icp

lx/rfc/nwsrfs/ens/bin/RELEASE/ens_post
lx/rfc/nwsrfs/ens/bin/RELEASE/ens_post_cp
lx/rfc/nwsrfs/ens/bin/RELEASE/ens_pre
lx/rfc/nwsrfs/ens/bin/RELEASE/ens_pre_cp
lx/rfc/nwsrfs/ens/bin/RELEASE/espadp
lx/rfc/nwsrfs/ens/bin/RELEASE/espts_conv
lx/rfc/nwsrfs/ens/bin/RELEASE/espvs
lx/rfc/nwsrfs/ens/bin/RELEASE/espvs_nwsrfs
lx/rfc/nwsrfs/ens/bin/RELEASE/print_ts

lx/rfc/xsets/bin/RELEASE/xsets

lx/rfc/xdat/bin/RELEASE/ofstofs
lx/rfc/xdat/bin/RELEASE/outputbadobs
lx/rfc/xdat/bin/RELEASE/xdat

lx/rfc/xnav/bin/RELEASE/ffgoutput
lx/rfc/xnav/bin/RELEASE/make24hrxmrg
lx/rfc/xnav/bin/RELEASE/make6hrxmrg
lx/rfc/xnav/bin/RELEASE/makeXdaysxmrg
lx/rfc/xnav/bin/RELEASE/wfoqpf
lx/rfc/xnav/bin/RELEASE/xmrg2text
lx/rfc/xnav/bin/RELEASE/xnav

lx/rfc/nwsrfs/ffg/bin/RELEASE/ffguid
lx/rfc/nwsrfs/ffg/bin/RELEASE/prodgen
lx/rfc/nwsrfs/ffg/bin/RELEASE/zgrid

lx/rfc/grib/bin/RELEASE/gribit

lx/rfc/ofsde/bin/RELEASE/ofsde

lx/rfc/idma/bin/RELEASE/idma
lx/rfc/idma/pgdb/scripts/create_index.sql
lx/rfc/idma/pgdb/scripts/create_pgdb
lx/rfc/idma/pgdb/scripts/create_psql_db
lx/rfc/idma/pgdb/scripts/create_tables.sql
lx/rfc/idma/pgdb/scripts/dd_help
lx/rfc/idma/pgdb/scripts/dd_options
lx/rfc/idma/pgdb/scripts/grant.sql
lx/rfc/idma/pgdb/scripts/readme
lx/rfc/idma/pgdb/scripts/sed_load_command_edit
lx/rfc/idma/pgdb/scripts/sed_unl_file_edit
lx/rfc/idma/pgdb/database/.
lx/rfc/idma/pgdb/logs/.

lx/rfc/nwsrfs/ens/scripts/bbuilder
lx/rfc/nwsrfs/ens/scripts/etsgen
lx/rfc/nwsrfs/ens/scripts/run_espdata

lx/rfc/nwsrfs/ifp/scripts/runsac
lx/rfc/nwsrfs/ifp/scripts/runsnow

lx/rfc/nwsrfs/ofs/scripts/ofs

lx/rfc/nwsrfs/sys_files/SHEFPARM

In the Arhive tar to be installed on the RAX machine:

Starting from the directory /rfc_arc, the files are:

bin/shef_decode_raw
bin/shef_decode_pro
cfg/decoders/SHEFPARM
verify/scripts/ingestpairs
verify/scripts/ivp
verify/scripts/ivpbatch
verify/scripts/ivpbatchb
verify/scripts/ivpcronsetup
verify/scripts/ivpruninfo
verify/bin/RELEASE/dbgen.jar
verify/bin/RELEASE/ihfsdb.jar
verify/bin/RELEASE/rfc.ob6-r27.jar

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2. OFS RELEASE NOTES (Back to Top)

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Program Name	New Version	New Version Date
batchpst	ob6-r27.0	03/22/2005
espinit	ob6-r27.0	04/01/2005
fcinit	ob6-r27.0	03/25/2005
fcst	ob6-r27.0	03/25/2005
filecrat	ob6-r27.0	03/22/2005
filesize	ob6-r27.0	03/22/2005
goesdb	ob6-r27.0	03/22/2005
ppdutil	ob6-r27.0	03/22/2005
ppinit	ob6-r27.0	04/04/2005
prdutil	ob6-r27.0	03/22/2005
reorder	ob6-r27.0	03/22/2005
sasmdb	ob6-r27.0	03/22/2005
shefpars	ob6-r27.0	03/22/2005
shefpost	ob6-r27.0	03/22/2005

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fcinit

Bug Fixes:

Corrected a problem where the FLDWAV initial conditions are not being properly computed. The model assumed that YDI values <=0 should be recomputed with backwater computations when they should not. The solution was to create a new option for ICOND, ICOND=2. (r25-54)

We corrected a problem in FCINIT which required the parameters for the FLDWAV multi-scenario flood mapping to be entered in a specific format. We corrected the code to accept these parameters in a free-format mode to be consistent with the documentation. (r26-16)

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fcst

Enhancements:

The default diurnal disaggregation can now be switched between 5 different patterns. The default disaggregation is used to distribute forecast Max/Min temperatures into 6 hour time steps. The shape of the patterns and the effect each pattern has on the resulting 6 hour time series are described in the NWSRFS Section 2 documentation. http://www.nws.noaa.gov/oh/hrl/nwsrfs/users_manual/part2/_pdf/27ofs_mat.pdf

A new technique named “DIURNAL” is used to switch between the possible disaggregation patterns.

Bug Fixes:
Corrected a problem with decoding mods that had 7 digits instead of 8. Seven digit dates are not supposed to be valid, and they will now be correctly rejected. (25-50)

Updated the RES-SNGL operation's RAINEVAP scheme. Previously, whenever there was rainfall input, the inflow timeseries dipped for the time periods with rainfall. The problem stems from the RAINEVAP scheme in a reservoir which has a BACKFLOW scheme. The updates will fix the zig-zag problems and over estimating simulated pool elevations. (25-59)

We corrected a problem when running FLDWAV in ESP with a window spanning two months which resulted in the FLDVIEW input file, <segname>.date containing incorrect dates. (25-62)

We corrected a problem with the PRINTOPS function in FCST - under certain circumstances the model state values in some carry over groups were printed with incorrect values. (25-64)

Corrected a problem with the MFC mod when it is applied to a model with one hourly time steps. (25-65)

Corrected a problem with the UADJ mod when it is applied to a model with one hourly time steps. (26-3)

ppinit
Enhancements:
Updated the program so that it could accommodate up to 20,000 MAPX area.

Bug Fixes:
The ppinit HRAP grid assignment algorithm has been rewritten, and greatly simplified, to correct problems with holes in the line segments. First, the new algorithm finds the HRAP grid rows and columns that completely contain the basin. Second, it searches every coordinate pair within the boundaries and determines if the pair belongs in the basin using basic point-in-polygon and point-on-line algorithms. It does this row-by-row. Third, when finished with an HRAP row, the algorithm processes the results to acquire the desired line segments.

The new algorithm will not generate holes in the line segments, unless they are supposed to be there. But, it will allow for an HRAP grid point to be assigned to more than one basin, if that grid point lies precisely on the boundary separating the basins. (r25-29)

Previously PPINIT would not allow a station to be defined with an ID of NEW, instead an error message identifying NEW as a reserved word. NEW is now allowed to be used as a station ID. (r25-32)

prdutil
Bug Fixes:
Increased the size of the “WORK ARRAY” for the DUMPSHEF command. (r25-49)

shefpost and **batchpst**
Bug Fixes:
Fixed a problem with the posting of RRS dataAn observation and future flows are posted to the preprocessor. When an observation is posted with an obs time 1 hour later a dump of the RRS data for those sites shows missing future data. (r24-32)

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3. CALB RELEASE NOTES (Back to Top)

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Program Name	New Version	New Version Date
map	ob6-r27.0	03/22/2005
mape	ob6-r27.0	03/22/2005
mapx	ob6-r27.0	03/22/2005
mat	ob6-r27.0	03/22/2005
mcp3	ob6-r27.0	03/25/2005
opt3	ob6-r27.0	03/25/2005
pxpp	ob6-r27.0	03/22/2005
taplot	ob6-r27.0	03/22/2005
gs2oh	ob6-r27.0	03/22/2005
ts2oh	ob6-r27.0	03/22/2005

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4. IFP RELEASE NOTES (Back to Top)

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Program Name	New Version	New Version Date
IFP_Map	ob6-r27.0	03/22/2005

NWSRFS_no_startup	ob6-r27.0	NA
bin_to_ss_input	ob6-r27.0	03/22/2005
delete_atoms	ob6-r27.0	NA
delete_is_running	ob6-r27.0	NA
ifp_nwsrfs	ob6-r27.0	03/25/2005
post_default_run_dates	ob6-r27.0	NA
sacsnow.jar	ob6-r27.0	NA
seg_sort	ob6-r27.0	NA
parse_mods_by_segment	ob6-r27.0	03/22/2005
print_prop	ob6-r27.0	NA
set_dates	ob6-r27.0	NA
startifp_done	ob6-r27.0	NA
working_dialog	ob6-r27.0	NA

ifp_nwsrfs
Bug Fixes:
Fixed a problem with the plotting of flood and alert stages when there is an active rating shift. (r25-34)

When making a SACCO mod, all the bucket content changes are not properly created (r26-2)

Values in the text box of the SACCO mod interface are rounded off to the nearest tenth even though some of the parameters need accuracy to the hundredths. Also, when typing values in the text box (when making a mod) to the hundredths the accuracy needs to be retained in the mod. (r26-5)

Fixed a bug in the IFP SACCO Display. Now the FGIX field can be adjusted only if the non-universal FROST technique is on. Previously, the FGIX scale bar did not react properly to the FROST technique and would not be adjustable when it should have been. (r26-18)

IFP_Map
Enhancements:

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5. ENSEMBLE PROGRAM RELEASE NOTES (Back to Top)

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Program Name	New Version	New Version Date
batchbuilder.jar	ob6-r27.0	NA

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ens_post	ob6-r27.0	03/23/2005
ens_post_cp	ob6-r27.0	03/23/2005
ens_pre	ob4-r25.3	03/22/2005
ens_pre_cp	ob6-r27.0	NA
ens_pre_s	ob6-r27.0	03/22/2005
print_ts	ob6-r27.0	NA
espadp	ob6-r27.0	03/23/2005
espts_conv	ob6-r27.0	NA
espvs	ob6-r27.0	03/22/2005

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espadp
Bug Fixes:
Updated the table functions to write out the correct non-exceedance values for minimum flows. Previously, when creating minimum flow probability tables the exceedance probabilities were shown instead of the non-exceedance probabilities. (r24-50)

Updated the color coding scheme for flood categories as per AHPS program defined requirements. (r26-11)

Fixed a problem which occurred when trying to display the traces for a CNRFC segment. (r26-14)

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6. ICP RELEASE NOTES (Back to Top)

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Program Name	New Version	New Version Date
icp	ob6-r27.0	03/22/2005

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7. X PROGRAM RELEASE NOTES (Back to Top)

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Program Name	New Version	New Program Date
outputbadobs	ob6-r27.0	03/22/2005
xdat	ob6-r27.0	03/22/2005
xnav	ob6-r27.0	03/22/2005
xsets	ob6-r27.0	03/25/2005
ofstofs	ob6-r27.0	03/22/2005

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ffgoutput		ob6-r27.0	03/22/2005
make24hrxmrg	ob6-r27.0		03/22/2005
make6hrxmrg	ob6-r27.0		03/22/2005
makeXdaysxmrg	ob6-r27.0		03/22/2005
wfoqpf		ob6-r27.0	03/22/2005

make24hrxmrg

Enhancements:

The make24hrxmrg file has been revised to allow creation of 24 hour totals for ending times other than hour 12 and for time zones other than UTC. The default behavior still is to create an xmrg file ending at 12Z today and the resulting file is named just as the previous version created it (i.e. 24hrxmrg04012005), but new tokens can be set to create the files for different ending times and/or time zones. Files created with these overrides would have file names such as 24hrxmrg0401200510E. This file would be created with an override specifying an ending hour of 10 and a time zone of E, for Eastern.

Usage:

make24hrxmrg [-h] [<days back>]

Arguments:

<-h>: Help option; displays instructions for how to run program.

<days back>: number of days back to get files to create the 24 hour total. Optional.

Apps-defaults Tokens (specific to make24hrxmrg):

make24hrxmrg_settoday: date in mm/dd/yyyy format to specify the date (will negate the "number of days back" arg)

make24hrxmrg_debug_level: switch to see debug output. Increasing detail for values of 1 and 2 (2 is highest level).

make24hrxmrg_endtime: hour to end the 24 hour total if different than 12Z.

make24hrxmrg_tz - time zone code (single letter) to override Z time (can be E, C, M, P, Y, H, L or Z).

Note: If the hour is different than 12 or the time zone is other than Z, the output file will be appended with the hour (2 digit) and TZC (single letter) to distinguish it from the standard file.

Note: Date conversions are done using the "getdate" function. This requires use of the DATEMSK environmentt variable which may or may not contain the necessary info. This whole functionality is provided via a temporary file created, populated, used and deleted from within this program.

xmrg2text (a new program in the xnav family)

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This utility program reads XMRG format files, and determines the lat/lon coordinates for each grid point, the gird cell's centroid and writes these out along with the grid point's value. In other words, it is an XMRG to ASCII reformatter for use by other programs. Output grid values are converted from 100ths of a mm and output in hundredths of an inch.

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Outputs 6 fields per grid cell (comma delimited) to stdout:

(1) ID: 8 digits made up of HRAP X coord followed by HRAP Y coord
(2) Latitude of southwest grid corner
(3) Longitude of southwest grid corner
(4) Precip amount in inches
(5) Latitude of grid centroid
(6) Longitude of grid centroid

The output can be large; for example, a 200x200 grid square will produce output of more than 2 MB. Gzip can be used to reduce file size to typically about 33% of original size.

Usage:
xmrg2text <xmrg file name>

Arguments:
<xmrg file name>: Full name of file to convert, relative to current working directory.

xsets
Bug Fixes:
Corrected a problem where the forecast progression button caused a core dump when you tried to view AKRFC data. (r23-25)

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8. UTIL RELEASE NOTES (Back to Top)
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Program Name	New Version	New Program Date
create_bas_bound	ob6-r27.0	NA
cvtgriddb	ob6-r27.0	NA
get_apps_defaults	ob6-r27.0	NA
looknset	ob6-r27.0	03/22/2005
dbgen.jar	ob6-r27.0	NA
ihfsdb.jar	ob6-r27.0	NA
rfc.ob6-r27.jar	ob6-r27.0	NA

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9. IDMA RELEASE NOTES (Back to Top)
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Program Name	New Version
idma	ob6-r27.0

Bug Fixes:
Fixed a problem which occurred when the sequence of stations on the @F and @S card in the input deck are different. The plots in IDMA were incorrect. (r25-36)

Increased the number of historical years the program can analyze from 50 to 100. A variety of unexpected behaviors occurred as a result of the 50 year limit. (r25-56) and (r26-4)

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10. GRIB RELEASE NOTES (Back to Top)
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Program Name	New Version	New Program Date
gribit	ob6-r27.0	03/22/2005

gribit
Bug Fixes:
Fixed a problem seen when running MPE Fieldgen caused by the contents of xmrg files generated by gribit. The MPE log files were returning messages about non-existent users. (r25-58).

NOTE: The gribit executable and the script which runs it, gribits, are being relocated to /awips/hydroapps/precip_proc/bin in OB6. This move is being made to facilitate the use of gribit at WFOs. Please update any tokens in the .Apps_defaults_site and .Apps_defaults_user files which might be affected by this change.

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11. SYS_FILES RELEASE NOTES (Back to Top)

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The following changes were made to the SHEFPARM file.

Added the following PE code to the SHEFPARM file: SP (Snowmelt + Rain) in inches
Updated the conversion factors for the following PE codes: SB (Snow, Blowing Snow Sublimation), SU (Snow, Surface Sublimation), and SM (Snow, Melt) all are in inches

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Added the following TS codes to the SHEFPARM file: FL (Areal Forecast) and any combination of a number from 1-9 and then one of the following letters F, G, M, P, R, S, T, V, W, X, Z. For example, 1F, 2F, 1G, 2G ..... These codes are to be used for the archive shefdecoder, where the numbers 1-9 represent low to high processing levels

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12. SCRIPT RELEASE NOTES (Back to Top)

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13. FFG RELEASE NOTES (Back to Top)

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Program Name	New Version	New Progam Date
ffguid	ob6-r27.0	03/22/2005
prodgen	ob6-r27.0	03/22/2005
zgrid	ob6-r27.0	03/22/2005

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14. OFSDE RELEASE NOTES (Back to Top)

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Program Name	New Version	New Progam Date
ofsde	ob6-r27.0	03/22/2005

Enhancements:
Replaced the operating system name (‘Linux’ or ’HP’) with the machine name in the log file, so that the machine running ofsde can be identified by looking at the log file.

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15. VERIFY/ARCHIVE RELEASE NOTES (Back to Top)

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Program Name (executable name)	New Version	New Program Date
Vfyruninfo Editor (ivpruninfo)	ob6-r27.0	03/22/2005
Verify Pairs Ingestor (ingestpairs)	ob6-r27.0	03/22/2005
IVP Batch Program(ivpbatch)	ob6-r27.0	03/22/2005
IVP Batch Builder (ivpbatchb)	ob6-r27.0	03/22/2005
IVP GUI (ivp)	ob6-r27.0	03/22/2005
shef_decode_raw	ob6	03/22/2005
shef_decode_pro	ob6	03/22/2005

Both shef_decode_pro and shef_decode_raw
Bug Fixes:
If the SHEF record to post is for forecast data (i.e. the type in the pedtsep is ‘F’), then the decoders no longer check to see if the time of the record to post is within the window specified by the tokens adb_shef_winfuture and adb_shef_winpast. (r25-60)

Fixed an internal code problem that caused the decoders to crash in specific circumstances after processing only a couple records. This also corrected an unnumbered ADB bug involving a fort.* file being created in the /rfc_arc/bin directory that should not be created. (r26-6)

Fixed problem with insert/update counts in the summary information. As part of the fix, the labels used in the log file when reporting the counts were changed. The new labels correspond to the old labels as follows:

OB5-R26	OB6-R27
Ins	Val Ins
Upd	Val Upd
NoIns	NoInsRec

NoUpd NoUpdRec

“Val Ins” provides a count of the number of individual values added to a record in the corresponding table of the archive database. “Val Upd” provides a count of the number of individual values updated. “NoInsRec” provides a count of the number of entire rows, or records, in the corresponding table of the archive database that failed to insert due to some query problem. “NoUpdRec” provides a count of the number of rows that failed to update. (r26-7)

Both the raw and processed decoders can now overwrite existing values in the database with missing values. (r26-9)

Implemented table changes to unkstnvalue and pehfsep for OB6. Specifically, the quality_code field has been dropped from unkstnvalue, and the fields quality_code, revision, product_id, prducttime and postingtime have been dropped from pehfsep. (r26-17)

Updated the SHEFPARM file. It is now the same file that is delivered to AWIPS. Additionally, a new type-source, ‘FL’, was added. (r26-15)

shef_decode_pro only
Bug Fixes:
Fixed shef_decode_pro to post max/min temperature data to the correct tables. If the duration code is instantaneous, data is posted as follows:

IF (extreumum is ‘X’ or ‘N’) THEN post to prodly
IF (extreumum is ‘R’ or ‘H’) THEN post to proqtrly
IF (extreumum is ‘V’ or ‘L’) THEN post to promnthly
OTHERWISE post to prohrly

(r26-10)

Added a check in the shef_decode_pro for whether the value to post has an obstime/validtime that is outside the window specified by the tokens adb_shef_winpast_pro and adb_shef_winfuture_pro. The checks against adb_shef_winpast_pro and adb_shef_winfuture_pro are performed independently, and if either is set to ‘9999’, then the corresponding obstime/validtime check is not performed. (r26-21)

shef_decode_pro only
Bug Fixes:

The shef_decode_raw program has been enhanced to provide it the ability to post data to the pemrsep, peqfsep, and pehfsep tables. For a SHEF record that is to be posted, if the d (duration) is 'M' and the t (type) is 'R', then the record is posted to the pemrsep. If the d is 'Q' and t is 'F', then it is posted to the peqfsep table. If the d is 'H' and the t is 'F', then it is posted to the pehfsep table. (ADB r1-19)

For the unkstnvalue table, the shef decoders now compute the idur field of a data row correctly. (ADB r1-23)

The shef decoders now enforce the SHEF revision flag results correctly. Two new tokens were created to replace the shef_overwrite and shef_userecode tokens. They are adb_shef_duplicate_raw and adb_shef_duplicate_pro:

adb_shef_duplicate_raw = ALWAYS_OVERWRITE/USE_REVCODE
adb_shef_duplicate_pro = ALWAYS_OVERWRITE/USE_REVCODE

If not found, both tokens are assumed to be set to USE_REVCODE. When the token is set to USE_REVCODE, the corresponding SHEF decoder will update duplicate data (i.e. a new value to post for which a value is already in the database) only when the SHEF revision flag is set. When the token is set to ALWAYS_OVERWRITE, then it always updates duplicate data. (ADB r1-24)

Added six tokens that allow for user controlled messaging in the shef_decode_raw and shef_decode_pro. All messages will be sent to the individual err file produced for each message processed.

adb_shef_raw_dupmess = ON/OFF
If set to 'ON', then a message will be displayed whenever a value to be posted is a duplicate of, or overwrites, an existing value in the archive database. Messages will only be seen if the adb_shef_duplicate_raw is set to 'USE_REVCODE' and if the value to post is a duplicate of an existing value and there was no revision flag in the SHEF message. The message will state that the value was not posted due to its being a duplicate.

adb_shef_raw_locmess = ON/OFF
If set to 'ON', then a message will be displayed whenever a value to be posted is associated with a location (lid) that cannot be found in the location table of the archive database. The message will state that the value was posted to the unkstnvalue table if adb_shef_raw_post_unk is set to 'IDS_AND_DATA', or it will state that the value was discarded if adb_shef_raw_post_unk is set to 'NONE'.

adb_shef_raw_elgmess = ON/OFF
If set to 'ON', then a message will be displayed whenever a value to be posted is associated with a lid and pedtsep that is not found in ingestfilter table. The message will state that the value was posted to the unkstnvalue table if

adb_shef_raw_post_unk is set to 'IDS_AND_DATA', or it will state that the value was discarded if adb_shef_raw_post_unk is set to 'NONE'.

adb_shef_pro_dupmess = ON/OFF
If set to 'ON', then a message will be displayed whenever a value to be posted is a duplicate of, or overwrites, an existing value in the archive database. Messages will only be seen if the adb_shef_duplicate_pro is set to 'USE_REVCODE' and if the value to post is a duplicate of an existing value and there was no revision flag in the SHEF message. The message will state that the value was not posted due to its being a duplicate.

adb_shef_pro_locmess = ON/OFF
If set to 'ON', then a message will be displayed whenever a value to be posted is associated with a location (lid) that cannot be found in the location table of the archive database. The message will state that the value was posted to the unkstnvalue table if adb_shef_pro_post_unk is set to 'IDS_AND_DATA', or it will state that the value was discarded if adb_shef_pro_post_unk is set to 'NONE'.

adb_shef_pro_elgmess = ON/OFF
If set to 'ON', then a message will be displayed whenever a value to be posted is associated with a lid and pedtsep that is not found in ingestfilter table. The message will state that the value was posted to the unkstnvalue table if adb_shef_pro_post_unk is set to 'IDS_AND_DATA', or it will state that the value was discarded if adb_shef_pro_post_unk is set to 'NONE'.

(ADB ER-9)

Unnumbered Bugs:

Fixed the summation in the "Total" field of the log output. Previously, it was the total of ValIns, ValUpd, NoInsRec, and NoUpdRec. Now it is the sum of ValIns and ValUpd, so that it is the total number of values successfully posted to the database, either as an insert or update.

The location and ingestfilter counters for the unkstnvalue table in the log file were changed so that they did not count values that were not posted due to the post flag of location being set to 0 or the ingest flag of ingestfilter being set to 0. Before, these values were included in the counters even though no data was posted to unkstnvalue.

Made the shef decoders more efficient by removing unneeded "trim" commands used within the SQL statements. Also, by correcting a problem with how the decoders dealt with database records in internal memory, the decoders now perform fewer insert/updates. Thanks to James Paul at ABRFC for identifying the solution to this problem.

Corrected a problem involving the datalimits and locdatalimits tables not being used for gross and reasonable range checks. If the locdatalimits table provides limits for the lid and pedtsep of the current SHEF record, then those limits are used. Otherwise, if the datalimits table provides limits for the pedtsep, then those are used. In either case, if datalimits are available and if either the gross or reasonable range limits are exceeded, then the quality code is changed to reflect that.

The performance logging feature was changed so that each decoder uses a separate flag to turn it on. Specifically, the raw decoder uses the apps-defaults token adb_shef_raw_perflog, while the processed decoder uses the apps-defaults token adb_shef_pro_perflog. If on, the performance log will be provided in a file called shef_perf.log in the logs directory for the decoder involved.

Enhancements:

Added ability to shef_decode_pro to check the location and ingestfilter tables before posting data. This option works exactly as it does in shef_decode_raw (including messaging and counters). The check of location and ingestfilter is performed only if the new token adb_shef_pro_checktab is set to 'ON'. See the fix for ADB Bug ER-9 above for further details on the how to display messages if the location or ingestfilter check fails.

> *NOTE: If both adb_shef_raw_checktab and adb_shef_pro_checktab are set to 'ON', the two decoders may slow down dramatically. It is recommended that the adb_shef_pro_checktab be set to 'OFF' unless you are certain that you need the checks to be performed.*

Implemented part 3 counters for shef_decode_pro as part of the enhancement listed above for the ability to check location and ingest filter tables.

Implemented the unkstnvalue table for the shef_decode_pro as part of the enhancement listed above for the ability to check location and ingest filter tables.

Messages that correspond to the dupmess, locmess, and elgmess tokens, as well as the message involved in checking for data outside the time window, have been moved to the individual error files. These messages are treated as warnings, so that an error file that is created is not destroyed if one of these messages is printed to it.

Changed structure of the jar files for the verification software. This change required changing all scripts that use the jar files to account for the new structure, including the following within the directory /rfc_arc/verify/scripts: ingestpairs, ivp, ivpbatch, ivpbatchb, ivpruninfo.

Implemented pempsep table in shef_decode_pro. Monthly data (i.e. data with a duration of 'M' in the pedtsep) will be posted to this table. Additionally, see the fix for HSD Bug r26-10 above.

Added error messaging to log file whenever a query of the archive database fails unexpectedly.

Added message to shef_decode_raw log file displaying whenever a value to post is outside the time window dictated by the tokens adb_shef_winpast and adb_shef_winfuture. The data is not posted in this case. This check is not applied to values with a type of 'F' (forecast) or 'C' (contingency). It is also not applied to values with a duration of 'M' (monthly).

Added message to shef_decode_raw log file displaying whenever a value to post is a forecast (type of 'F') and has a basistime after the validtime. Data is still posted in this case.

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If there are any questions, Please contact the HSD RFC support team.